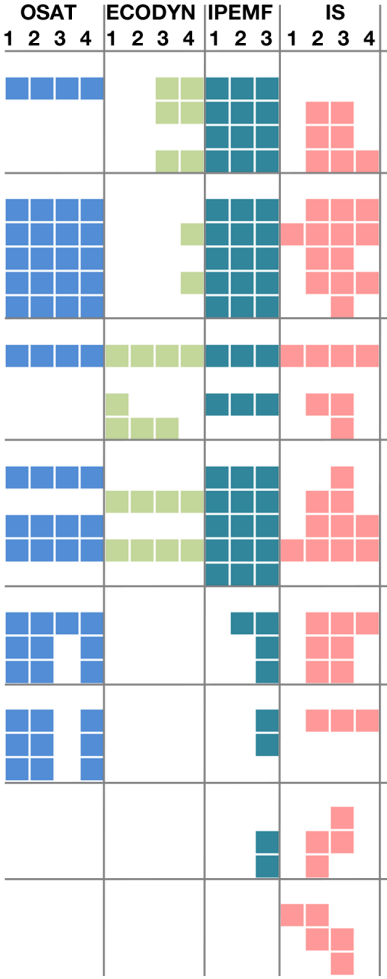
Matrix: GLERL Goals by Branch[1,2] X NOAA Science and Education Goals and Objectives

GLERL Branch Goals NOAA Goals and Objectives



NOAA Goals and Objectives
Science: Climate Adaptation & Mitigation
Improved scientific understanding of the changing climate system and its impacts
Assessments of current and future states of the climate system that identify potential impacts and inform science, service, and stewardship decisions
Mitigation and adaptation efforts supported by sustained, reliable, and timely climate services
A climate-literate public that understands its vulnerabilities to a changing climate and makes informed decisions
Science: Weather-Ready Nation
Reduced loss of life, property, and disruption from high-impact events
Improve freshwater resource management
Improve transportation efficiency and safety
Healthy people and communities due to improved air and water quality services
A more productive and efficient economy through information relevant to key sectors of the U.S. economy
Science: Healthy Oceans
Improved understanding of ecosystems to inform resource management decisions
Recovered and healthy marine and coastal species
Healthy habitats that sustain resilient and thriving marine resources and communities
Sustainable fisheries and safe seafood for healthy populations and vibrant communities
Science: Resilient Coastal Communities and Economies
Resilient coastal communities that can adapt to the impacts of hazards and climate change
Comprehensive ocean and coastal planning and management
Safe, efficient and environmentally sound marine transportation
Improved coastal water quality supporting human health and coastal ecosystem services
Safe, environmentally sound Arctic access and resource management
Education: Science-Informed Society
Youth and adults from all backgrounds improve their understanding of NOAA-related sciences by participating in education and outreach opportunities
Formal and informal educators integrate NOAA-related sciences into their curricula, practices, and programs
Formal and informal education organizations integrate NOAA-related science content and collaborate with NOAA scientists on the development of exhibits, media, materials, and programs that support NOAA's mission
Education: Safety and Preparedness
Youth and adults from all backgrounds are aware of, prepare for, and appropriately respond to environmental hazards that impact health, safety, and the economy in their communities
Formal and informal educators use and produce education materials and programs that integrate and promote consistent science-based messaging on hazards, impacts, and societal challenges related to water, weather, and climate
Formal and informal education institutions integrate water, weather, and climate hazard awareness, preparedness, and response information into curricula, exhibits, and programs that create learning opportunities for youth and adults
Education: Future Workforce
Students, particularly from underrepresented groups, consider education and career pathways in disciplines that support NOAA's mission
Postsecondary students, particularly from underrepresented groups, pursue and complete degrees in disciplines critical to NOAA's mission
Graduates completing NOAA-supported student opportunities continue education, enter the workforce, and advance in careers that support NOAA's mission
Education: Organizational Excellence
Leaders internal and external to NOAA recognize and support education investments as a way to achieve agency mandates, mission, and goals
NOAA educators and partners collaborate at local, regional, and national levels to coordinate efforts, build capacity, and better serve educational audiences
NOAA develops and supports a coordinated portfolio of products, programs, and partnerships that improves education opportunities in NOAA-related content areas for underserved audiences

[1] GLERL Science Branches:
OSAT- Observing Systems and Advanced Technology
EcoDyn - Ecosystem Dynamics
IPEMF - Integrated Physical and Ecological Modeling and Forecasting
IS - Information Services

[2] GLERL goals are indexed by science branch, and can be found on the next page.

Matrix Crosswalk: GLERL Goals by Branch

Branch	Goal
OSAT	1. Expanded use and application of technology to enhance remote sensing capacity to assess ecosystem impacts and for use in modeling and operations. 2. Improved in situ observational capacity to increase number of sites and number of instruments and sensors at those sites. 3. Observational infrastructure (e.g., instrumentation and equipment, mobile and fixed platforms, and data management) provides reliability and flexibility needed for innovation on a long-term basis. 4. Operational capacity that supports research and the transition of products to operations.
EcoDyn	1. A holistic understanding of the role of established and potentially future invasive species on Great Lakes ecosystems. 2. An integrated understanding of the spatial organization of the food webs and nutrient use and transport from nearshore to offshore food webs. 3. The capacity to forecast effects of climate change on Great Lakes food webs. 4. A quantitative understanding of the drivers of HABs to predict their concentration, extent, movement, and toxicity.
IPEMF	1. Integrated modeling system to improve forecast capability of lake hydrodynamics, lake ice, hydrological response, ecological processes, water quality, and climatic variability and trends across spatial and temporal scales. 2. Enhanced/ improved capability for medium- and long-range forecasts by quantifying uncertainty and developing skill assessment tools (long-term, decadal scale climate) 3. Be a trusted scientific leader on prediction of high impact or extreme events, including prediction on water issues of regional and national significance.
IS	1. A collaborative organizational environment that fosters information flow, transparency, trust, and a team-building approach, and enhances the functionality of GLERL programs and staff. 2. Increased awareness and understanding of GLERL expertise, programs, products, and services among other NOAA programs, NOAA leadership and Congress. 3. Information needs of constituent groups (e.g. other governmental agencies, resource managers, decisionmakers, researchers, media, private industry, educational institutions, NGO's, general public) in the Great Lakes region are met. 4. Recognition of NOAA GLERL as a resource for research products and services utilized by constituent groups and partners in the Great Lakes and beyond.